

## 7.0 Ten Year Implementation Plan

A ten year implementation plan for FY 2014 – 2023 has been prepared for the TDP Annual Update to include a new tenth year or FY 2023 as presented.

### 7.1 Capital Improvement Plan

Annually, MDT prepares a proposed capital budget and a multi-year Capital Plan. Funded Metrorail and Metrobus projects identified within the Capital Plan are expected to be implemented within the ten year planning period. The Capital Improvement Plan for FY 2014-2023 is presented in Table 7-1. The escalation applied is specific to each project as related to project conditions and contractual agreements. Each selected project corresponds to a committed funding source and is consistent with the Miami-Dade MPO's FY 2013 – 2017 Transportation Improvement Program (TIP).

Funded projects are expected to be implemented within the next ten years for the Metrorail and Metrobus system. There are no planned service extensions or expansion of the existing Metromover system under consideration at this time or within the planning horizon of this TDP Annual Update.

At the time this TDP Annual Update was being prepared the proposed FY 2013 – 2014 capital budget and multi-year capital plan were being finalized by MDT. Once MDT determines the final budget and capital plan, this section will be updated to reflect the most current information.

### 7.2 2023 Recommended Service Plan

The MDT Recommended Service Plan (RSP) serves as the needs plan for the MDT system. The 2023 RSP has been developed for the FY 2014-2023 TDP Annual Update and has been updated from the previous RSP as presented in last year's FY 2013 – 2022 TDP Annual Update. Any future project recommended in this section for implementation is contingent upon Miami-Dade County receiving the appropriate federal, state and local funding for its implementation.

Some of the improvements and adjustments reflected in the 2023 RSP are identified under the PTP one-half percent sales surtax approved by voters on November 5, 2002. Most of the improvements listed in the RSP beyond 2013 were not included in the original PTP improvements list, but may be funded with future PTP surtax funds. These improvements were deemed to be the most pressing or requested by the community after the original PTP list was completed. This section addresses the four modes of transit as operated by MDT to include Metrobus, Metrorail, Metromover and Special Transportation Services.

#### 7.2.1 Recommended Service Plan – Existing Metrobus Routes

MDT is committed to provide a level of transit service that will provide efficient services to passengers throughout the Miami-Dade County service area. The provision of service is continuously considered while MDT seeks to properly address critical issues of generating revenue, managing operational budgets, and prioritizing capital expansion programs.

Since the TDP Annual Update comprises part of MDT's operational foundation for the future, the importance of "rightsizing" the RSP cannot be over emphasized. Therefore, the following details both improvements and adjustments to achieve MDT's long term objectives.

**Table 7-1: MDT FY 2013 Adopted Budget and Multi-Year Capital Plan (\$000's)**

Project Name	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
Lehman Yard Rehab and Expansion Phase 1	\$ 1,232	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,232
Bus Tracker System/Computer Aided Dispatch	\$ 6,179	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 6,179
Infrastructure Renewal Plan (IRP)	\$ 12,500	\$ 12,500	\$ 12,500	\$ 12,500	\$ 12,500	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 62,500
Capital Expansion Reserve	\$ 4,847	\$ 3,356	\$ 1,979	\$ 245	\$ 530	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,957
Rail Vehicle Replacement	\$ 39,552	\$ 75,986	\$ 106,033	\$ 56,510	\$ 698	\$ 11,950	\$ -	\$ -	\$ -	\$ -	\$ 290,729
Lehman Center Test Track for Metrorail	\$ 2,714	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,714
Track and Guideway Rehab Subset	\$ 5,911	\$ 5,549	\$ 1,525	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12,985
ADA Improvements & Equipment	\$ 278	\$ 292	\$ 307	\$ 307	\$ 307	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,491
Busway ADA Improvements	\$ 646	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 646
Graphics and Signage Upgrade	\$ 538	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 538
Bus and Bus Facilities	\$ 2,002	\$ 107	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,109
Bus Enhancements	\$ 21,740	\$ 1,904	\$ 680	\$ 2,850	\$ 2,040	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 29,214
Facilities and Equipment Rehabilitation	\$ 278	\$ 292	\$ 307	\$ 307	\$ 307	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,491
Transit Operations System (TOS) Replacement	\$ 1,984	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,984
Electronic Signage Info Systems/WIFI Implementation	\$ 88	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 88
Bus Replacement	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 100,000
Bus Tools and Equipment	\$ 278	\$ 292	\$ 307	\$ 307	\$ 307	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,491
Passenger Amenities and Transit Enhancements	\$ 479	\$ 484	\$ 489	\$ 494	\$ 499	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,445
Capitalization Preventative Maintenance	\$ 78,071	\$ 78,851	\$ 79,640	\$ 80,442	\$ 81,240	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 398,244
Kendall Enhanced Bus Service	\$ 678	\$ 1,318	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,996
Metrorail Bike Path (M-PATH)	\$ 160	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 160
Metromover Fiber Replacement	\$ 441	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 441
Mover Video Project	\$ 96	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 96
NW 7th Ave and NW 62nd St Passenger Activity Center	\$ 300	\$ 300	\$ 149	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 749
Kendall Drive Signalization	\$ 696	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 696
Park and Ride lot Quail Roost Drive	\$ 177	\$ 1,223	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,400
Park and Ride lot SW 344th Street	\$ 91	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 91
Northeast Transit Hub Enhancements	\$ 1,332	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,332
Pedestrian Overpass at University	\$ 1,245	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,245
Security and Safety Equipment	\$ 571	\$ 600	\$ 630	\$ 661	\$ 661	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,123
<b>TOTAL</b>	<b>\$ 205,104</b>	<b>\$ 203,054</b>	<b>\$ 224,546</b>	<b>\$ 174,623</b>	<b>\$ 119,089</b>	<b>\$ 11,950</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 938,366</b>

Source: Miami-Dade Transit, F-5 Report, 2013

Service route improvement and adjustment needs outlined in the RSP are proposed for implementation throughout the ten year planning horizon of FY 2014-FY 2023.

Table 7-2 provides a summary description of all bus service improvements, impact of additional buses on the peak vehicle requirements (PVR), annual operating need per improvement, and programming of transit improvements by fiscal years; and corresponding funding needs by fiscal year. The estimated total need for improvements to existing transit routes over this ten year planning horizon is approximately \$8 million (Table 7-2).

It should be noted that the service route improvements and adjustment needs outlined in the 2023 RSP are anticipated to change once the results of the Transit Service Evaluation Study – Phase 2 are finalized in early 2013. The results of this study will identify a service plan that maximizes the efficiency and effectiveness of the system. The final product will be a schedule-ready detailed plan which includes estimated impact on ridership, resources, and operating cost.

The 2014 TDP Major Update will provide a detailed presentation of service route improvements and adjustment needs identified by the Transit Service Evaluation Study – Phase 2.

#### 7.2.1.1 Transit Hubs and Feeder Routes for Existing Routes

The 2023 RSP improvements to the existing transit routes also include the development of a regional transit hub system. The current bus system generally operates on a modified grid pattern to provide feeder services to Metrorail and Metromover stations. Under the modified grid, bus routes will continue to serve their respective corridors and Metrorail stations, but will also provide connections to various routes within the general service area at a single location or transit hub.

Thirteen (13) transit hubs are proposed throughout Miami-Dade County. Passenger amenities are planned for these locations to provide transit riders the ability to purchase transit passes, obtain transit schedule information, shelters with weather protection and benches, etc. Some of these proposed transit hubs already serve these functions (i.e., Dadeland station) while other hubs continue to remain in the conceptual planning phase. Overall, the Downtown Intermodal Terminal and the Northeast Transit Hub Enhancements (NETHE) have the highest number of proposed routes, with twenty-four and twelve routes planned respectively.

Table 7-3 provides a list of the transit hubs with corresponding route connections planned to serve them. These hubs are also illustrated in Figure 7-1. In addition to those listed there are many other areas that serve as transit hubs. For example, Douglas Road Metrorail station and other Metrorail stations, as well as the Omni all serve as transit hubs.

**Table 7-2: 2014 – 2023 Recommended Service Plan Summary for Existing Routes (2023)**

Route	Change Description	2014		2015		2016		2017		2018		2019		2020		2021		2022		2023	
		Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR
B (102)	No planned improvements.																				
C (103)	No planned improvements.																				
E (105)	No planned improvements.																				
G (107)	No planned improvements.																				
H (108)	No planned improvements.																				
J (110)	No planned improvements.																				
L (112)	No planned improvements.																				
M (113)	No planned improvements.																				
S (119)	No planned improvements.																				
1	Extend Route to Dadeland South Metrorail Station			\$500,000	3	\$500,000		\$500,000		\$500,000		\$500,000		\$500,000		\$500,000		\$500,000		\$500,000	
2	Realign northern terminus to future Golden Glades					\$99,000	0	\$99,000		\$99,000		\$99,000		\$99,000		\$99,000		\$99,000		\$99,000	
3	No planned improvements.																				
6	No planned improvements.																				
7	No planned improvements.																				
8	Extend Route to future terminal at SW 147th Avenue and SW 8 St.							\$357,000		\$357,000		\$357,000		\$357,000		\$357,000		\$357,000		\$357,000	
9	No planned improvements.																				
10	No planned improvements.																				
11	No planned improvements.																				
12	No planned improvements.																				
16	No planned improvements.																				
17	No planned improvements.																				
19	Provide weekend service every 40 minutes	\$639,000	0	\$639,000		\$639,000		\$639,000		\$639,000		\$639,000		\$639,000		\$639,000		\$639,000		\$639,000	
21	No planned improvements.																				
22	No planned improvements.																				
24	Convert to the Coral Way Limited and provide local service between SW 153rd Avenue and Ponce de Leon Blvd. Limited-stop service will be provided east of Ponce de Leon to Downtown Miami due to City of Miami Coral Way Trolley. (See New Routes Table)	-\$600,000	-2																		

**Table 7-2: 2014 – 2023 Recommended Service Plan Summary for Existing Routes (2023) (continued)**

Route	Change Description	2014		2015		2016		2017		2018		2019		2020		2021		2022		2023	
		Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR
27	Extend route to new Park & Ride at NW 215th Street																				
29	No planned improvements.																				
31 (Busway Local)	Extend service to Florida City/Homestead along South Miami-Dade Busway Extension.			\$2,411,848	5	\$2,411,848		\$2,411,848		\$2,411,848		\$2,411,848		\$2,411,848		\$2,411,848		\$2,411,848		\$2,411,848	
32	No planned improvements.																				
33	No planned improvements.																				
34 (Busway Flyer)	Terminate service at the 344 Street Park & Ride	-\$210,281	-2																		
35	Improve peak headway from 30 to 20 minutes.	\$642,620	2	\$642,620		\$642,620		\$642,620		\$642,620		\$642,620		\$642,620		\$642,620		\$642,620		\$642,620	
36	No planned improvements.																				
37	No planned improvements.																				
38 (Busway MAX)	Improve peak headway from 12 to 10 minutes.	\$500,000	12A -8	\$500,000		\$500,000		\$500,000		\$500,000		\$500,000		\$500,000		\$500,000		\$500,000		\$500,000	
40	Extend Route to future terminal at SW 147th Avenue and SW 8 St.							\$80,000		\$80,000		\$80,000		\$80,000		\$80,000		\$80,000		\$80,000	
42	No planned improvements.																				
46 (Liberty City Connection)	No planned improvements.																				
48	No planned improvements.																				
51 (Flagler MAX)	Route to be extended to the future terminal at SW 147th Ave and SW 8th St.							\$70,000													
51 (Flagler MAX)	Route to be transformed to Flagler Enhanced Bus. (See New Routes Table)									-\$2,830,000	-10										
52	No planned improvements.																				
54	No planned improvements.																				
56	Discontinue route segment along SW 117th Avenue to Miami-Dade College.	-\$92,000		-\$92,000		-\$92,000		-\$92,000		-\$92,000		-\$92,000		-\$92,000		-\$92,000		-\$92,000		-\$92,000	
57	No planned improvements.																				
62	No planned improvements.																				
70	Truncate Route at Southland Mall when Cutler Bay Circulator begins service.	-\$82,000		-\$82,000		-\$82,000		-\$82,000		-\$82,000		-\$82,000		-\$82,000		-\$82,000		-\$82,000		-\$82,000	
71	Extend Route to Palmetto Station via 74 St.			\$500,000	2	\$500,000		\$500,000		\$500,000		\$500,000		\$500,000		\$500,000		\$500,000		\$500,000	
72	No planned improvements.																				

**Figure 7-2: 2014 – 2023 Recommended Service Plan Summary for Existing Routes (2023) (continued)**

Route	Change Description	2014		2015		2016		2017		2018		2019		2020		2021		2022		2023	
		Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR
73	No planned improvements.																				
75	No planned improvements.																				
77	No planned improvements.																				
79 (79 Street MAX)	Extend Route to Tri-Rail Metrorail Station			\$153,000	1	\$153,000		\$153,000		\$153,000		\$153,000		\$153,000		\$153,000		\$153,000		\$153,000	
87	Extend to Flagler Station in Medley			\$400,000	1	\$400,000		\$400,000		\$400,000		\$400,000		\$400,000		\$400,000		\$400,000		\$400,000	
88	No planned improvements.																				
93 (Biscayne MAX)	Route to be transformed to Biscayne Enhanced Bus. (See New Routes Table)	-\$2,200,000	-9																		
95X	No planned improvements.																				
99	No planned improvements.																				
104	No planned improvements.																				
115 (Mid-Beach Local)	No planned improvements.																				
117 (North-Beach Local)	No planned improvements.																				
120 (Beach MAX)	Improve Peak Headways from 12 to 7 minutes	\$8,146,360	10																		
123 (South Beach Local)	No planned improvements.																				
132 (Tri-Rail Doral Shuttle)	Extend West in Doral Area to NW 97 Ave. and North to NW 74 Street; East to MIA/MIC			\$750,000	2	\$750,000		\$750,000		\$750,000		\$750,000		\$750,000		\$750,000		\$750,000		\$750,000	
133 (Tri-Rail Airport Shuttle)	To be discontinued after Tri-Rail finishes the double tracking to the MIC.	-\$400,000	-1	-\$400,000		-\$400,000		-\$400,000		-\$400,000		-\$400,000		-\$400,000		-\$400,000		-\$400,000		-\$400,000	
135	No planned improvements.																				
136	No planned improvements.																				
137 (West Dade Connection)	No planned improvements.																				
150 (Miami Beach Airport Flyer)	Improve peak headway from 30 to 20 minutes.	\$1,725,000	3	\$1,725,000		\$1,725,000		\$1,725,000		\$1,725,000		\$1,725,000		\$1,725,000		\$1,725,000		\$1,725,000		\$1,725,000	
183 Local	No planned improvements.																				

**Table 7-2: 2014 – 2023 Recommended Service Plan Summary for Existing Routes (2023) (continued)**

Route	Change Description	2014		2015		2016		2017		2018		2019		2020		2021		2022		2023	
		Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR
195 (I-95 Dade Broward Express)	No planned improvements.																				
202 (Little Haiti Connection)	No planned improvements.																				
204 (Killian KAT)	No planned improvements.																				
207 (Little Havana Circulator)	No planned improvements.																				
208	No planned improvements.																				
211 (Overtown Circulator)	No planned improvements.																				
212	No planned improvements.																				
238 (Weekend Express)	Provide weekend express service originating at the MIC to Dolphin Mall via SR 836			\$250,000	1	\$250,000		\$250,000		\$250,000		\$250,000		\$250,000		\$250,000		\$250,000		\$250,000	
238 (East-West Connection)	Extend westward to Beacon Lakes.	\$229,878																			
243 (Seaport Connection)	No planned improvements.																				
246 (Night Owl)	No planned improvements.																				
248 (Brickell Key Shuttle)	No planned improvements.																				
249 (Coconut Grove Circulator)	No planned improvements.																				
252 (Coral Reef MAX)	Operate later evening service into the Metrozoo Entertainment complex.											\$81,004	0								
252 (Coral Reef MAX)	Route to be transformed to the Coral Reef Enhanced Bus (See New Routes Table).													-\$1,941,000	-7						
254 (Brownsville Circulator)	No planned improvements.																				
267 (Ludlam Limited)	No planned improvements.																				
272 (Sunset KAT)	No planned improvements.																				
277 (7th Avenue MAX)	Route to be transformed to the NW 7th Avenue Enhanced Bus. (See New Routes Table)			-\$921,000	-5																

**Table 7-2: 2014 – 2023 Recommended Service Plan Summary for Existing Routes (2023) (continued)**

Route	Change Description	2014		2015		2016		2017		2018		2019		2020		2021		2022		2023	
		Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR
286 North Pointe Circulator	No planned improvements.																				
287 (Saga Bay MAX)	No planned improvements.																				
288 (Kendall Cruiser)	Improve headways to 7.5 minutes and include stop at Park & Ride on SW 88 Street and SW 127th Avenue.			\$639,000	2	\$639,000		\$639,000		\$639,000		\$639,000		\$639,000		\$639,000		\$639,000		\$639,000	
297 (Orange MAX)	Route to be transformed to 27th Avenue Enhanced Bus. (Phase 1 July 2012)							-\$2,000,000	-9												
301	No planned improvements.																				
302	No planned improvements.																				
344	No planned improvements.																				
500 (Midnight Owl)	No planned improvements.																				
<b>INCREMENTAL TOTALS</b>		<b>\$8,298,577</b>	<b>5</b>	<b>\$7,615,468</b>	<b>12</b>	<b>\$8,635,468</b>	<b>0</b>	<b>\$7,142,468</b>	<b>(9)</b>	<b>\$6,242,468</b>	<b>-14</b>	<b>\$9,153,472</b>	<b>0</b>	<b>\$7,131,468</b>	<b>0</b>	<b>\$9,072,468</b>	<b>0</b>	<b>\$9,072,468</b>	<b>0</b>	<b>\$9,072,468</b>	<b>0</b>
(ARTICULATED)			12		0		0		0		-4		0		0		0		0		0
(FULL SIZE BUSES)			-7		12		0		-9		-10		0		0		0		0		0
<b>CUMULATIVE TOTALS</b>		<b>\$8,298,577</b>	<b>5</b>	<b>\$15,914,045</b>	<b>17</b>	<b>\$24,549,513</b>	<b>17</b>	<b>\$31,691,981</b>	<b>8</b>	<b>\$37,934,449</b>	<b>-6</b>	<b>\$47,087,921</b>	<b>-6</b>	<b>\$54,219,389</b>	<b>-6</b>	<b>\$63,291,857</b>	<b>-6</b>	<b>\$72,364,325</b>	<b>-6</b>	<b>\$81,436,793</b>	<b>-6</b>
(ARTICULATED)			12		12		12		12		8		8		8		8		8		8
(FULL SIZE BUSES)			-7		5		5		-4		-14		-14		-14		-14		-14		-14

Source: Miami-Dade Transit, 2013

Note: Improvement cost estimates are based on 2013 cost factors and do not account for inflation.

**Table 7-3: Future Transit Hub Locations and Feeder Routes for Existing Bus Routes**

TERMINALS	ROUTES																	
	A	B	C	E	G	H	J	L	M	S	1	2	3	6	7	8	9	10
Downtown Intermodal Terminal			■							■		■	■		■		■	
Dadeland South Intermodal Station																		
Northeast Transit Hub Enhancements (NETHE) Mall at NE 163rd Street				■		■						■	■					■
Northeast Transit Hub Enhancements (NETHE) at Aventura Mall				■						■			■					■
Miami Intermodal Center (MIC)							■								■			
Dolphin Station (HEFT at NW 12th Street)															■			
South Miami-Dade Busway at SW 344th Street																		
NW 27th Avenue and NW 215th Street																		
SW 147th Avenue and SW 8th Street																■		
NW 7th Avenue and NW 62nd Street																		
Golden Glades Multimodal Terminal				■								■						
Palmetto Intermodal Terminal																		
NE 151st Street and Biscayne Blvd.													■					

TERMINALS	ROUTES																	
	11	12	16	17	19	21	22	24	27	29	31*	32	33	34*	35	36	37	38*
Downtown Intermodal Terminal	■					■												
Dadeland South Intermodal Station											■			■				■
Northeast Transit Hub Enhancements (NETHE) Mall at NE 163rd Street			■		■		■											
Northeast Transit Hub Enhancements (NETHE) at Aventura Mall																		
Miami Intermodal Center (MIC)																		■
Dolphin Station (HEFT at NW 12th Street)																	■	
South Miami-Dade Busway at SW 344th Street														■	■			■
NW 27th Avenue and NW 215th Street									■									
SW 147th Avenue and SW 8th Street								■										
NW 7th Avenue and NW 62nd Street																		
Golden Glades Multimodal Terminal								■										
Palmetto Intermodal Terminal																		
NE 151st Street and Biscayne Blvd.																		

**Table 7-3 Future Transit Hub Locations and Feeder Routes for Existing Bus Routes (continued)**

TERMINALS	ROUTES																
	40	42	46*	48	51*	52	54	56	57	62	70	71	72	73	75	77	79*
Downtown Intermodal Terminal																	
Dadeland South Intermodal Station																	
Northeast Transit Hub Enhancements (NETHE) Mall at NE 163rd Street																	
Northeast Transit Hub Enhancements (NETHE) at Aventura Mall																	
Miami Intermodal Center (MIC)																	
Dolphin Station (HEFT at NW 12th Street)																	
South Miami-Dade Busway at SW 344th Street																	
NW 27th Avenue and NW 215th Street																	
SW 147th Avenue and SW 8th Street																	
NW 7th Avenue and NW 62nd Street																	
Golden Glades Multimodal Terminal																	
Palmetto Intermodal Terminal																	
NE 151st Street and Biscayne Blvd.																	

TERMINALS	ROUTES																	
	87	88	93*	95*	99	104	115*	117*	120*	123*	132*	133*	135	136	137*	150*	183*	195*
Downtown Intermodal Terminal																		
Dadeland South Intermodal Station																		
Northeast Transit Hub Enhancements (NETHE) Mall at NE 163rd Street																		
Northeast Transit Hub Enhancements (NETHE) at Aventura Mall																		
Miami Intermodal Center (MIC)																		
Dolphin Station (HEFT at NW 12th Street)																		
South Miami-Dade Busway at SW 344th Street																		
NW 27th Avenue and NW 215th Street																		
SW 147th Avenue and SW 8th Street																		
NW 7th Avenue and NW 62nd Street																		
Golden Glades Multimodal Terminal																		
Palmetto Intermodal Terminal																		
NE 151st Street and Biscayne Blvd.																		

**Table 7-3: Future Transit Hub Locations and Feeder Routes for Existing Bus Routes (continued)**

TERMINALS	ROUTES																		
	200*	202*	204*	207*	208*	211*	212*	238*	243*	246*	249*	252*	254*	267*	272*	277*	286*	287*	
Downtown Intermodal Terminal																			
Dadeland South Intermodal Station																			
Northeast Transit Hub Enhancements (NETHE) Mall at NE 163rd Street																			
Northeast Transit Hub Enhancements (NETHE) Mall at Aventura																			
West Kendall Transit Terminal																			
Miami Intermodal Center (MIC)																			
Dolphin Station (HEFT at NW 12th Street)																			
South Miami-Dade Busway at SW 344th Street																			
NW 27th Avenue and NW 215th Street																			
SW 147th Avenue and SW 8th Street																			
NW 7th Avenue and NW 62nd Street																			
Golden Glades Multimodal Terminal																			
Palmetto Intermodal Terminal																			
NE 151st Street and Biscayne Blvd.																			

TERMINALS	ROUTES					
	288*	297*	301	302	344	500*
Downtown Intermodal Terminal						
Dadeland South Intermodal Station						
Northeast Transit Hub Enhancements (NETHE) Mall at NE 163rd Street						
Northeast Transit Hub Enhancements (NETHE) Mall at Aventura						
West Kendall Transit Terminal						
Miami Intermodal Center (MIC)						
Dolphin Station (HEFT at NW 12th Street)						
South Miami-Dade Busway at SW 344th Street						
NW 27th Avenue and NW 215th Street						
SW 147th Avenue and SW 8th Street						
NW 7th Avenue and NW 62nd Street						
Golden Glades Multimodal Terminal						
Palmetto Intermodal Terminal						
NE 151st Street and Biscayne Blvd.						

Source: Miami-Dade Transit, 2013

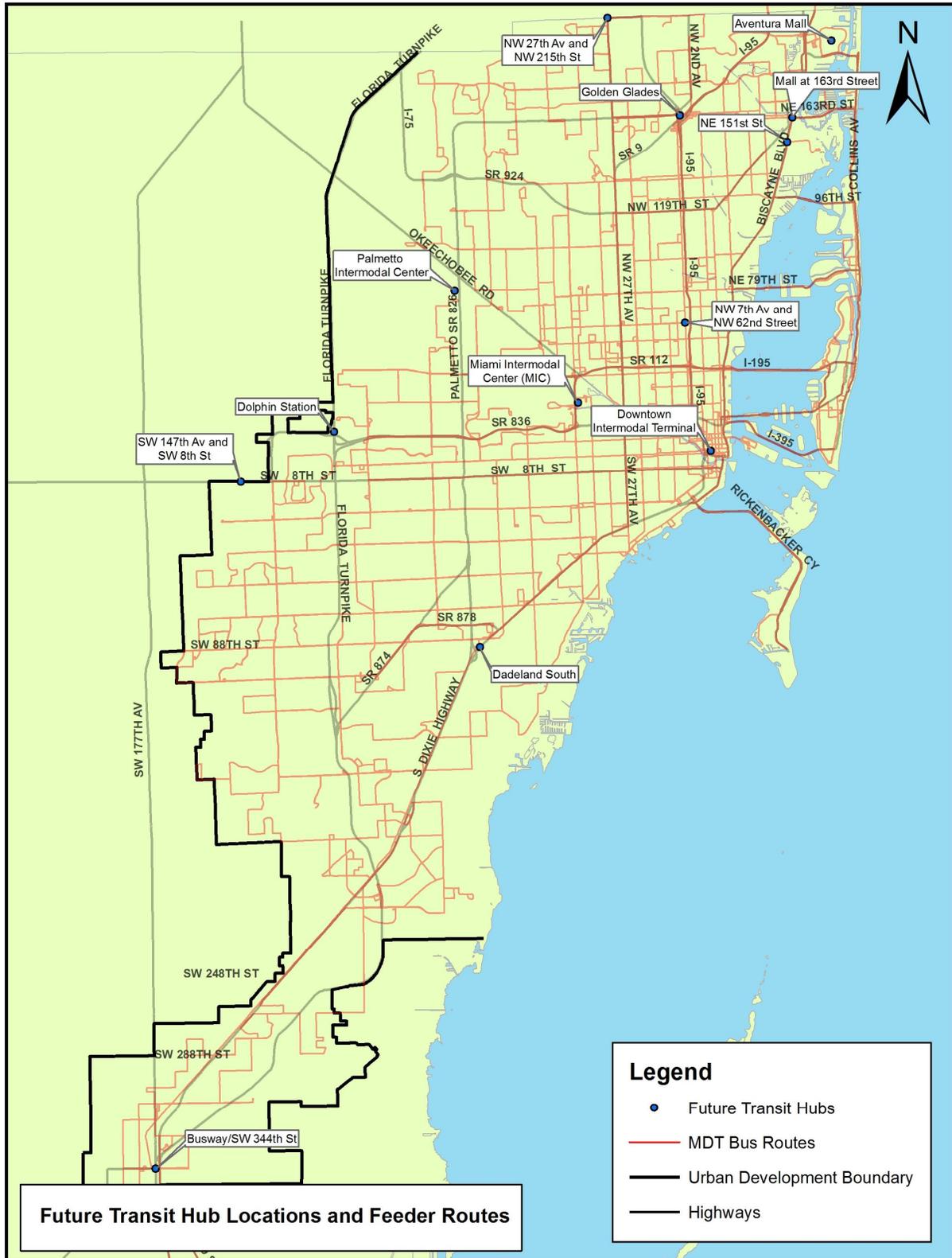
**\*ROUTE DESCRIPTIONS**

Route 31: Busway Local  
Route 34: Busway Flyer  
Route 38: Busway Max  
Route 46: Liberty City Connection  
Route 51: Flagler MAX  
Route 79: 79 Street MAX  
Route 93: Biscayne MAX  
Route 95: Golden Glades Express  
Route 115: Mid-North Beach Connection (CW)  
Route 117: Mid-North Beach Connection (CCW)  
Route 120: Beach MAX  
Route 123: South Beach Local  
Route 132: Doral/Tri-Rail Shuttle

Route 133: Airport/Tri-Rail Shuttle  
Route 137: West Dade Connection  
Route 150: Miami Beach Airport Flyer  
Route 183: 183 Street Local  
Route 195: Dade-Broward Express  
Route 200: Cutler Bay Local  
Route 202: Little Haiti Connection  
Route 204: Killian KAT  
Route 207: Little Havana Connection (CW)  
Route 208: Little Havana Connection (CCW)  
Route 211: Overtown Circulator  
Route 212: Sweetwater Circulator  
Route 238: East-West Connection/Weekend Express

Route 243: Seaport Connection  
Route 246: Night Owl  
Route 249: Coconut Grove Circulator  
Route 252: Coral Reef MAX  
Route 254: Brownsville Circulator  
Route 267: Ludlam Limited  
Route 272: Sunset KAT  
Route 277: 7 Avenue MAX  
Route 286: North Pointe Circulator  
Route 287: Saga Bay MAX  
Route 288: Kendall Cruiser  
Route 297: 27 Avenue Orange MAX  
Route 500: Midnight Owl

**Figure 7-1: Future Transit Hub Locations and Feeder Routes for Existing Bus Routes**



Source: Miami-Dade Transit, 2013

### 7.2.2 Recommended Service Plan – New Metrobus Routes

Thirteen (13) new transit routes have been proposed under the 2023 RSP to replace old existing routes or add new service (Table 7-4). The table presents the proposed new transit routes with associated service levels, peak vehicle requirements for buses, annual operating funding needs, and proposed implementation schedule. The preliminary programming of these routes was conducted in a systematic and regional approach based on coordination with major transit capital projects. These new routes represent MDT's response to citizens' request for additional enhanced bus service throughout Miami-Dade County. These new transit routes are also illustrated in Figure 7-2A and Figure 7-2B.

- **NW 7<sup>th</sup> Avenue Enhanced Bus:** This route would provide premium limited-stop transit service along NW 7<sup>th</sup> Avenue between Downtown Miami and the park-and-ride lot located at the Golden Glades Interchange. Service headways will be 15 minutes during the AM/PM peak-hour and 30 minutes during the mid-day. This route will provide a premium transit connection to the NW 7<sup>th</sup> Avenue Transit Village located at NW 7<sup>th</sup> Avenue and NW 62<sup>nd</sup> Street. Revenue service is anticipated to begin in 2015 using six (6) new standard 40-foot buses.
- **295 Express Bus:** This route would provide express commuter transit service between the Miami-Dade/Broward County Line (NW 215<sup>th</sup> Street and NW 27<sup>th</sup> Avenue) and Downtown Miami via the Turnpike and I-95. Service headways will be 15 minutes during the AM/PM peak-hour. Revenue service is anticipated to begin in 2016 using six (6) new commuter coach buses.
- **Palmetto Express Bus (Palmetto Corridor):** This route would provide express commuter transit service between the proposed FDOT park-and-ride lot at I-75 (as proposed by the FDOT I-75 Express Bus Service Alternatives Study) and Miami Gardens Drive interchange to the Palmetto Metrorail Station via SR 826. Service headways will be 15 minutes during the AM/PM peak-hour. Revenue service is anticipated to begin in 2022 using five (5) new commuter coach buses.
- **195-BC – Broward Boulevard to Civic Center:** This route would provide express commuter transit service between the Fort Lauderdale Tri-Rail Station located at Broward Boulevard in Broward County and the Civic Center Metrorail Station in Miami-Dade County via I-95. Service headways will be 30 minutes during the AM/PM peak-hour. Revenue service is anticipated to begin in 2014 using four (4) new commuter coach buses.
- **195-SC – Sheridan Street to Civic Center:** This route would provide express commuter transit service between the Sheridan Street Tri-Rail Station in Broward County and the Civic Center Metrorail Station in Miami-Dade County via I-95. Service headways will be 30 minutes during the AM/PM peak-hour. Revenue service is anticipated to begin in 2014 using three (3) new commuter coach buses.
- **Coral Way Limited:** This route would ultimately provide local and premium limited-stop transit service along Coral Way between Downtown Miami and SW 147th Avenue. In 2014, local service would be provided between SW 153rd Avenue and Ponce de Leon Boulevard. Limited-stop service would be provided between Ponce de Leon Boulevard and Downtown Miami. This route would be the main trunk line on Coral Way as part of a restructuring of service by MDT due to the introduction of the new City of Miami Trolley route. The City's new route is planned to operate on Coral Way between the Brickell Avenue Metrorail/Metromover Station and Ponce de Leon Boulevard. MDT would restructure its Coral Way

service to take advantage of the new City Trolley resulting in a more efficient and faster service while minimizing service duplication. In 2017, the western portion of the route will be realigned to terminate at the future terminal located at SW 8th Street and SW 147<sup>th</sup> Avenue. Service headways will be 30 minutes during the AM/PM peak-hour, 30 minutes during the mid-day and 40 minutes on weekends. Revenue service is anticipated to begin in 2014 using six new standard 40-foot buses.

- **Douglas Road Enhanced Bus (Douglas Corridor):** This route would provide premium limited-stop transit service along NW/SW 37<sup>th</sup> Avenue connecting the MIC on the north and the Douglas Road Metrorail Station on the south. The Douglas Road corridor is the only People's Transportation Plan (PTP) transit corridor that has not been studied for rapid transit improvements and represents an important connection to high employment centers of MIA and the Coral Gables Central Business District along a densely populated area. Service headways will be 15 minutes during the AM/PM peak-hour and 30 minutes during the mid-day. Revenue service is anticipated to begin in 2020 using five (5) new standard 40-foot buses.
- **Coral Reef Enhanced Bus:** This route would provide premium limited-stop transit service along SW 152<sup>nd</sup> Street and SW 137<sup>th</sup> Avenue between the intersection SW 162<sup>nd</sup> Avenue and SW 136<sup>th</sup> Street, the Kendall-Tamiami Executive Airport, and the South Miami-Dade Busway SW 152<sup>nd</sup> Street Station. In 2008, Miami-Dade County designated 170 acres adjacent to Zoo Miami as an entertainment area and plans to issue a request for proposals for the private development of this site with a water park, hotels, or similar uses. In 2012, the Miami-Dade County Aviation Department submitted a zoning application that is currently being reviewed by the Developmental Impact Committee (DIC) to allow retail, restaurant and bank uses at the Kendall-Tamiami Executive Airport.

This enhanced bus route would provide a premium transit connection between the Kendall-Tamiami Executive Airport, the future regional entertainment complex near Zoo Miami and the South Miami-Dade Busway. Service headways will be 15 minutes during the AM/PM peak-hour and 30 minutes during the mid-day. Revenue service is anticipated to begin in 2020 using six (6) new standard 40-foot buses.

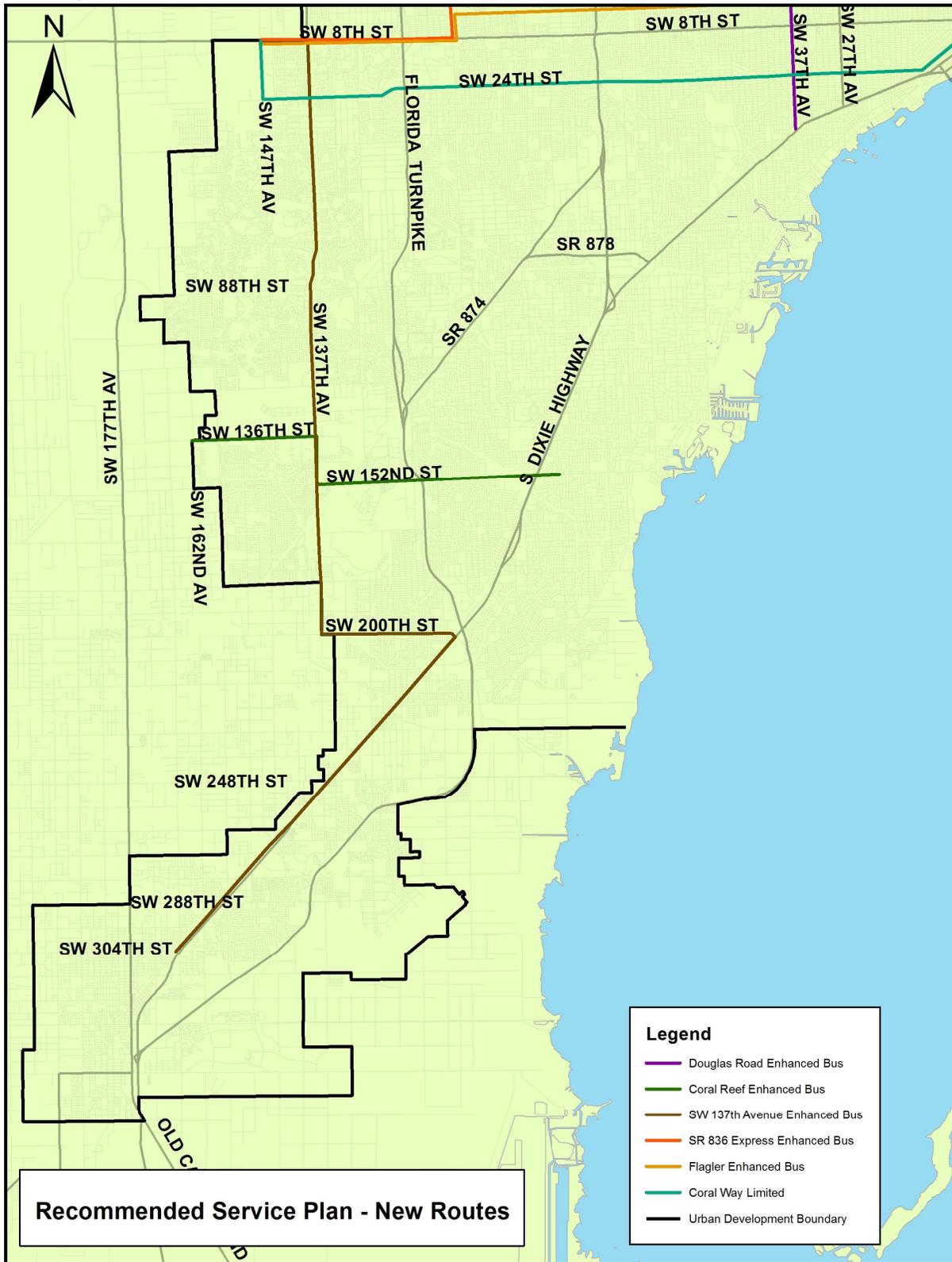
- **SW 137th Avenue Enhanced Bus:** This route will provide premium limited-stop transit service along SW 137<sup>th</sup> Avenue from MDT's proposed park-and-ride/bus terminal station (SW 8<sup>th</sup> Street and SW 147<sup>th</sup> Avenue) to SW 304<sup>th</sup> Street and US-1. This enhanced bus project will feature strategic park-and-ride locations. In addition, this route provides a premium north-south transit connection for the West Kendall area connecting several residential areas with large shopping centers, which include Kendale Lakes Mall, Miller Square and London Square. In 2007, the Miami-Dade Metropolitan Planning Organization conducted a study of potential transit service improvements in the Kendall area. Bus rapid transit (BRT) service on SW 137<sup>th</sup> Avenue was one of the recommendations made in that study. Service headways will be 20 minutes during the AM/PM peak-hour and 40 minutes during the mid-day. Revenue service is anticipated to begin in 2020 using nine (9) new standard 40-foot buses.
- **Biscayne Enhanced Bus (Northeast Corridor):** This route will provide premium limited-stop transit service along Biscayne Boulevard/US-1 from Downtown Miami to Aventura Mall. This route provides service to the Adrienne Arsht Performing Arts Center, and a direct connection to the cities of Little Haiti, Miami Shores, North Miami and North Miami Beach. Service headways will be 15 minutes during the AM/PM peak-hour and 20 minutes during the mid-day.

Revenue service is anticipated to begin in 2014 using 11 new 60-foot diesel/electric hybrid, clean diesel, compressed natural gas (CNG), or other alternative fuel buses. The bus purchase component is considered Phase I for this corridor.

The Miami-Dade MPO in cooperation with MDT is performing an Implementation Plan for the Biscayne Boulevard Enhanced Bus Service (EBS) project. This EBS route will feature robust stations, WiFi, real-time “Where is the Bus?” arrival times via the internet or on web-enabled mobile devices, real-time “Next Bus” arrival information via electronic signs, Transit Signal Priority (TSP), and Park-and-Rides. Phase II for the Biscayne Enhanced Bus Service project will feature 10 minute service headways during the AM/PM peak-hour and 20 minutes during the mid-day using an additional five (5) new 60-foot diesel/electric hybrid buses, clean diesel, compressed natural gas (CNG) or other alternative fuel buses. Phase II is expected to be completed by 2020.

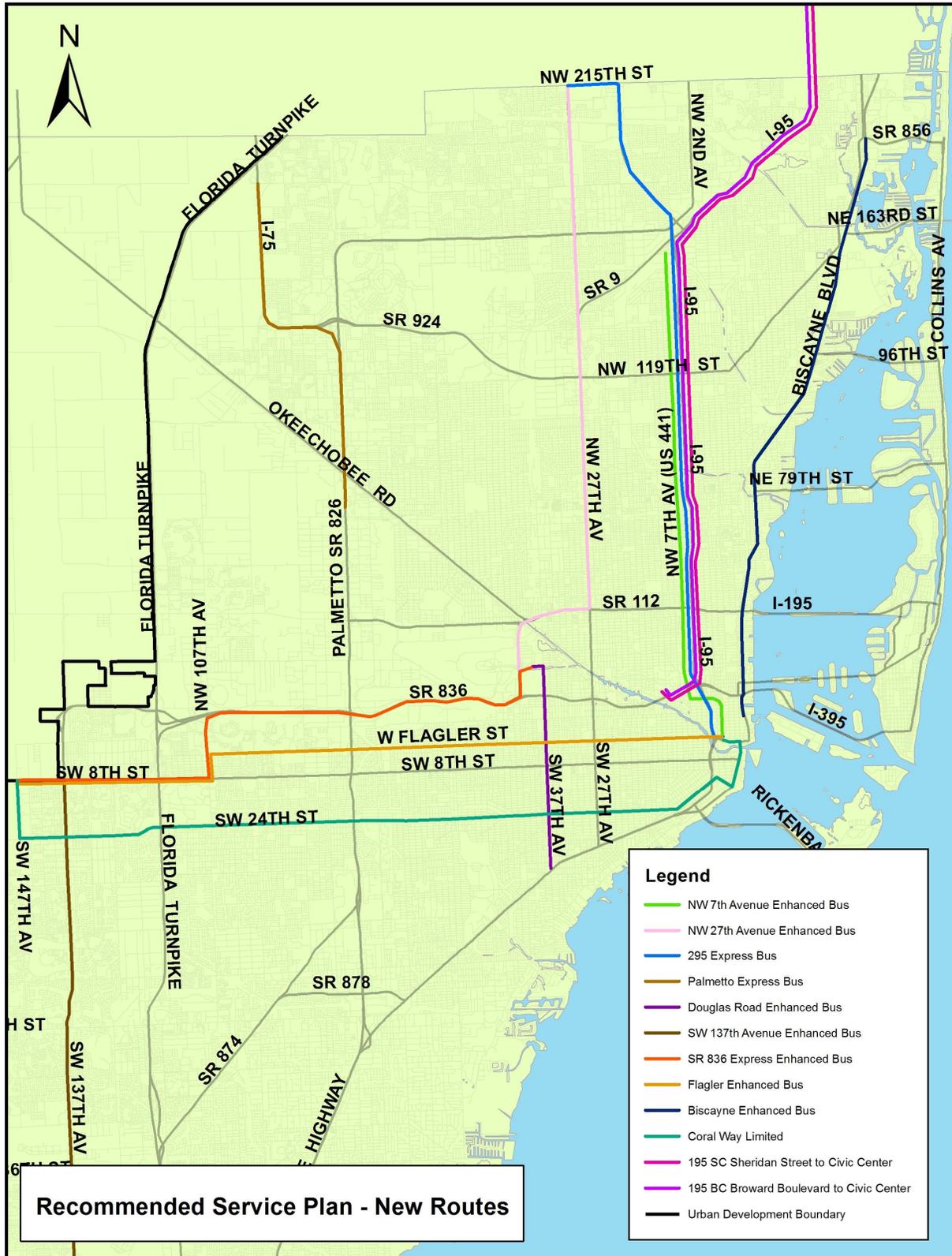
- **NW 27<sup>th</sup> Avenue Enhanced Bus (North Corridor):** This route would provide premium limited-stop transit service along the NW 27<sup>th</sup> Avenue corridor from the Miami-Dade/Broward County Line (NW 215<sup>th</sup> Street and NW 27<sup>th</sup> Avenue) to the MIC. A park-and-ride/bus terminal station is proposed at the northern terminus of the route at NW 215<sup>th</sup> Street. Service headways will be 10 minutes during the AM/PM peak-hour and 20 minutes during the mid-day. Revenue service is anticipated to begin in 2017 using 11 new 60-foot diesel/electric hybrid, clean diesel, compressed natural gas, or other alternative fuel buses.
- **SR 836 Express Enhanced Bus (East-West Corridor):** This route would provide premium limited-stop and express transit service along the SR 836 and SW 8<sup>th</sup> Street East-West corridor from west Miami-Dade County (SW 8<sup>th</sup> Street and SW 147<sup>th</sup> Avenue) to the MIC via SW/NW 107<sup>th</sup> Avenue and SR 836. A park-and-ride/bus terminal station is proposed at the western terminus of the route at SW 8<sup>th</sup> Street and SW 147<sup>th</sup> Avenue. Service headways will be 10 minutes during the AM/PM peak-hour. The planned long-term improvements for this route will be completed by 2017 using 11 new 60-foot diesel/electric hybrid, clean diesel, compressed natural gas, or other alternative fuel buses.
- **Flagler Enhanced Bus (East-West Corridor):** This route will provide premium limited-stop transit service along Flagler Street from Downtown Miami to West Miami-Dade County. This service will connect the new Marlins Ballpark along NW 7<sup>th</sup> Street as well as serve the Government Center Metrorail Station, Miami-Dade College Wolfson Campus, American Airlines Arena, the Metropolitan Hospital, the Magic City Casino and Mall of the Americas. In addition, this route will serve Florida International University’s Modesto A. Maidique Campus (MMC) and Engineering Campus (EC). This route will also serve a proposed park-and-ride/bus terminal station at SW 8<sup>th</sup> Street and SW 147<sup>th</sup> Avenue. Service headways will be 12 minutes during the AM/PM peak-hour and 30 minutes during the mid-day. Revenue service is anticipated to begin in 2018 using 10 new 60-foot diesel/electric hybrid, clean diesel, compressed natural gas, or other alternative fuel buses.

**Figure 7-2A: 2023 Recommended Service Plan – New Metrobus Routes (South)**



Source: Miami-Dade Transit, 2013

Figure 7-2B: 2023 Recommended Service Plan – New Metrobus Routes (North)



Source: Miami-Dade Transit, 2013

**Table 7-4: 2014 – 2023 Recommended Service Plan New Routes Description**

New Route	Description	Headways			2014		2015		2016		2017		2018		2019		2020		2021		2022		2023	
		Peak	Mid Day	Week End	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR										
NW 7 Avenue Enhanced Bus	This route would provide premium limited-stop transit service along NW 7 Avenue between Downtown Miami and the park-and-ride lot located at the Golden Glades Interchange.	15	30	N/S			\$1,085,000	6	\$1,085,000		\$1,085,000		\$1,085,000		\$1,085,000		\$1,085,000		\$1,085,000		\$1,085,000		\$1,085,000	
295 Express Bus	This route would provide express commuter transit service between the Miami-Dade/Broward County Line (NW 215th Street and NW 27th Avenue) and Downtown Miami via the Turnpike and I-95.	15	N/S	N/S					\$1,184,000	6C	\$1,184,000		\$1,184,000		\$1,184,000		\$1,184,000		\$1,184,000		\$1,184,000		\$1,184,000	
Palmetto Express Bus	This route would provide express commuter transit service between the proposed FDOT park-and-ride lot at I-75 (as proposed by the FDOT I-75 Express Bus Service Alternatives Study) and Miami Gardens Drive interchange to the Palmetto Metrorail Station via SR 826.	15	N/S	N/S																\$987,000	5C	\$987,000		
195-BC - Broward Blvd. to Civic Center	This route would provide express commuter transit service between the Ft. Lauderdale Tri-Rail Station located at Broward Boulevard in Broward County and the Civic Center Metrorail Station in Miami-Dade County via I-95.	30	N/S	N/S	\$781,440	4C	\$781,440		\$781,440		\$781,440		\$781,440		\$781,440		\$781,440		\$781,440		\$781,440		\$781,440	
195- SC- Sheridan Street to Civic Center	This route would provide express commuter transit service between the Sheridan Street Tri-Rail Station in Broward County and the Civic Center Metrorail Station in Miami-Dade County via I-95.	30	N/S	N/S	\$592,000	3C	\$592,000		\$592,000		\$592,000		\$592,000		\$592,000		\$592,000		\$592,000		\$592,000		\$592,000	
Coral Way Limited	This route would provide local service between SW 153rd Avenue and Ponce de Leon Blvd. Limited-stop service will be provided east of Ponce de Leon to Downtown Miami due to City of Miami Coral Way Trolley.	30	30	40	\$1,184,000	6	\$1,184,000		\$1,184,000		\$1,184,000		\$1,184,000		\$1,184,000		\$1,184,000		\$1,184,000		\$1,184,000		\$1,184,000	
Coral Way Limited	Discontinue segment on Coral Way from SW147th Ave to 153rd Ave and extend Route to future terminal at SW 147th Ave and SW 8 St.	N/A	N/A	N/A							\$40,000		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000		\$40,000	
Douglas Road Enhanced Bus	This route would provide premium limited-stop transit service along NW/SW 37 Avenue connecting the Miami Intermodal Center (MIC) on the north and the Douglas Road Metrorail Station on the south.	15	30	N/S												\$1,580,000	5	\$1,580,000		\$1,580,000		\$1,580,000		
Coral Reef Enhanced Bus	This route would provide premium limited-stop transit service along SW 152 Street and SW 137 Avenue between the intersection SW 162 Avenue and SW 136 Street, the Kendall-Tamiami Executive Airport, and the South Miami-Dade Busway	15	30	N/S												\$2,200,000	7	\$2,200,000		\$2,200,000		\$2,200,000		

**Table 7-4: 2014 – 2023 Recommended Service Plan New Routes Description (continued)**

New Route	Description	Headways			2014		2015		2016		2017		2018		2019		2020		2021		2022		2023	
		Peak	Mid Day	Week End	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR
SW 137 Avenue Enhanced Bus	This route will provide premium limited-stop transit service along SW 137 Avenue from MDT's proposed park-and-ride/bus terminal station (SW 8th Street and SW 147th Avenue) to SW 304 Street and US-1.	20	40	N/S													\$2,763,000	9	\$2,763,000		\$2,763,000		\$2,763,000	
Biscayne Enhanced Bus	This route will provide premium limited-stop transit service along Biscayne Boulevard and US-1 from Downtown Miami to Aventura Mall. (Phase 1)	15	20	N/S	\$3,000,000	11A	\$3,000,000		\$3,000,000		\$3,000,000		\$3,000,000		\$3,000,000									
Biscayne Enhanced Bus	Phase 1 service to be discontinued.																-\$3,300,000							
Biscayne Enhanced Bus	Phase 2 service to be implemented which will feature robust stations, WiFi, real-time "Where is the Bus?" arrival times via the internet or on web-enabled mobile devices, real-time "Next Bus" arrival information via electronic signs, Transit Signal Priority (TSP), and Park-and-Rides	10	20	N/S													\$3,900,000	5A	\$3,900,000		\$3,900,000		\$3,900,000	
NW 27 Avenue Enhanced Bus	This route will provide premium limited-stop transit service along the NW 27 Avenue corridor from the Miami-Dade/Broward County Line (NW 215 Street and NW 27 Avenue) to the MIC. (Phase 2)	10	20	N/S						\$3,200,000	11A	\$3,200,000		\$3,200,000		\$3,200,000		\$3,200,000		\$3,200,000		\$3,200,000		\$3,200,000
SR 836 Express Enhanced Bus	This route will provide premium limited-stop and express transit service along SR 836 and SW 8 Street East-West corridor from west Miami-Dade County (SW 8 Street and SW 147 Avenue) to the MIC via SW/NW 107 Avenue and SR 836.	10	N/S	N/S						\$2,400,000	11A	\$2,400,000		\$2,400,000		\$2,400,000		\$2,400,000		\$2,400,000		\$2,400,000		\$2,400,000
Flagler Enhanced Bus	This route will provide premium limited-stop transit service along Flagler Street from Downtown Miami to West Miami-Dade County.	12	30	N/S								\$3,600,000	10A	\$3,600,000		\$3,600,000		\$3,600,000		\$3,600,000		\$3,600,000		\$3,600,000

<b>INCREMENTAL TOTALS</b>		\$5,557,440	24	\$6,642,440	6	\$7,826,440	6	\$13,466,440	22	\$17,066,440	10	\$17,066,440	0	\$21,209,440	26	\$24,509,440	0	\$25,496,440	5	\$25,496,440	0	\$25,496,440	0
(ARTICS)			11		0		0		22		10		0		5		0		0	0		0	
(COMMUTER COACH BUSES)			7		0		6		0		0		0		0		0		5		0	0	
(FULL SIZE BUSES)			6		6		0		0		0		0		21		0		0	0		0	

<b>CUMULATIVE TOTALS</b>		\$5,557,440	24	\$12,199,880	30	\$20,026,320	36	\$33,492,760	58	\$50,559,200	68	\$67,625,640	68	\$88,835,080	94	\$113,344,520	94	\$138,840,960	99	\$164,337,400	99	\$164,337,400	99
(ARTICS)			11		11		11		33		43		43		48		48		48		48	48	
(COMMUTER COACH BUSES)			7		7		13		13		13		13		13		13		18		18	18	
(FULL SIZE BUSES)			6		12		12		12		12		12		33		33		33		33	33	

Source: Miami-Dade Transit, 2013 Note: Improvement cost estimates are based on 2013 cost factors and do not account for inflation.

The 2013 MDT TDP Annual Update RSP includes 13 proposed routes which are listed in Table 7-4 as new service routes or replacements for old existing Metrobus routes.

**Transit Hubs and Feeder Routes for New Metrobus Routes**

The 2023 RSP provided that 13 transit hubs were proposed for implementation in locations throughout Miami-Dade County. As a result, these new bus routes would serve local corridors and stations, while also providing connecting service to transit hubs. Table 7-5 provides a summary overview of the new routes that have been added to provide additional service to identified transit hub locations.

**Table 7-5: Future Transit Hub Locations and Feeder Routes for New Metrobus Routes**

TERMINALS	ROUTES					
	NW 7 Avenue Enhanced Bus	NW 27 Avenue Enhanced Bus	295 Express Bus	Palmetto Express Bus	SR 836 Express Enhanced Bus	Flagler Enhanced Bus
Downtown Intermodal Terminal						
Dadeland South Intermodal Station						
Northeast Transit Hub Enhancements (NETHE) Mall at 163rd Street						
Northeast Transit Hub Enhancements (NETHE) Mall at Aventura						
Miami Intermodal Center (MIC)						
Dolphin Station (HEFT at NW 12th Street)						
South Miami-Dade Busway at SW 344th Street						
NW 27th Avenue and NW 215th Street						
SW 147th Avenue and SW 8th Street						
NW 7th Avenue and NW 62nd Street						
Golden Glades Multimodal Terminal						
Palmetto Intermodal Terminal						
NE 151st Street and Biscayne Blvd.						

Source: Miami-Dade Transit, 2013

**Table 7-5: Future Transit Hub Locations and Feeder Routes for New Metrobus Routes (continued)**

TERMINALS	ROUTES					
	195- BC - Broward Blvd. to Civic Center	195- SC - Sheridan Street to Civic Center	Coral Way Limited	Douglas Road Enhanced Bus	Coral Reef Enhanced Bus	SW 137 Avenue Enhanced Bus
Downtown Intermodal Terminal						
Dadeland South Intermodal Station						
Northeast Transit Hub Enhancements (NETHE) Mall at 163rd Street						
Northeast Transit Hub Enhancements (NETHE) Mall at Aventura						
Miami Intermodal Center (MIC)						
Dolphin Station (HEFT at NW 12th Street)						
South Miami-Dade Busway at SW 344th Street						
NW 27th Avenue and NW 215th Street						
SW 147th Avenue and SW 8th Street						
NW 7th Avenue and NW 62nd Street						
Golden Glades Multimodal Terminal						
Palmetto Intermodal Terminal						
NE 151st Street and Biscayne Blvd.						

TERMINALS	ROUTES	
	Biscayne Enhanced Bus	
Downtown Intermodal Terminal		
Dadeland South Intermodal Station		
Northeast Transit Hub Enhancements (NETHE) Mall at 163rd Street		
Northeast Transit Hub Enhancements (NETHE) Mall at Aventura		
Miami Intermodal Center (MIC)		
Dolphin Station (HEFT at NW 12th Street)		
South Miami-Dade Busway at SW 344th Street		
NW 27th Avenue and NW 215th Street		
SW 147th Avenue and SW 8th Street		
NW 7th Avenue and NW 62nd Street		
Golden Glades Multimodal Terminal		
Palmetto Intermodal Terminal		
NE 151st Street and Biscayne Blvd.		

Source: Miami-Dade Transit, 2013

### 7.2.3 Recommended Service Plan – Metrorail

On July 28, 2012, MDT unveiled one of its most anticipated projects: The Miami International Airport Metrorail Station and the Orange Line rail service to Miami International Airport (MIA) via the MIA People-Mover line operated by Miami-Dade Aviation Department. This 2.4 mile extension provides a fast and reliable Metrorail connection to the airport for the millions of residents, visitors and employees who travel to and from MIA every year. This vital project, considered the centerpiece of the People’s Transportation Plan (PTP), features a multi-level station, a state of the art design and the ease of travel and flexibility to and from the airport.

In the latter part of 2012, MDT experienced an increase in ridership of approximately 2.3 percent (2.3%) on all its transportation modes as compared to the same time period in 2011. The largest increase was observed on the Metrorail system, which experienced a 4.8 percent (4.8%) increase over the same time period in 2011. In fact, this is the highest rail ridership seen in the past three (3) years for average weekday boardings. This increase in ridership can be attributed to the opening of the new Orange Line, the Metrorail extension that takes passengers to the MIA station. With the implementation of this new service to the MIA Station, rail headways have increased from approximately every ten minutes during peak times to about every five minutes for those stations that serve both the Orange and the Green Lines.

The completion of the Orange Line to MIA represents a milestone achievement for MDT and the PTP. However, feasibility of future Metrorail extensions has been a topic of concern given MDT’s approved 10-year operating budget and existing revenue sources. Therefore, MDT is considering an expansion plan that involves the development of less costly modal approaches to the expansion program such as Bus Rapid Transit and Express Bus service.

In an effort to begin to chart the course of future transit development beyond the Airport Link, the Office of the Citizen’s Independent Transportation Trust (CITT) will be hosting a Summit in June 2013 which will bring together major stakeholders, agencies, community and select national experts. The Summit will feature a Community Visioning Forum to engage the public and obtain public input on the future of transit development in Miami-Dade County. This event marks the “first step” in the process of engaging stakeholders and the community in charting the course of future transit development. Follow-up events will be held to continue refining the direction of future transit development in Miami-Dade County. Insights obtained as a result of these events will inform future versions of the Recommended Service Plan for Metrorail which will be further expanded on in the 2014 TDP Major Update.

### 7.2.4 Recommended Service Plan – Special Transportation Services

Miami-Dade Transit is working towards administering a new contract for STS services which is anticipated to begin in spring 2013. With this new contract, there will be Information Technology (IT) improvements including mobile data terminals and radio frequency identification which will be implemented by summer 2013. The technology will also provide Global Positioning (GPS) information to identify vehicle location. Together, these technologies will provide safety, performance and accounting improvements to the service.

### 7.3 Capital Needs

#### 7.3.1 Transit Terminals

As identified in the 2023 RSP, the modified grid system requires the development of transit hubs throughout the region of service. All the projects listed are under different stages of project development. Table 7-6 lists the capital needs identified for transit hub locations along with their respective status and funding needs for the 2023 RSP. This is followed by a list of proposed park-and-ride locations as presented in Table 7-7 and illustrated in Figure 7-3.

**Table 7-6: 2023 Recommended Service Plan Transit Hub Needs**

Transit Hubs	Status	Unfunded Needs
<b>Downtown Intermodal Terminal</b>	The MPO is managing this feasibility study which is considering implementation of a linear intermodal terminal in Downtown Miami that can accommodate various transportation modes including the future location of the proposed Florida East Coast (FEC) terminal. The recommended area of consideration for the proposed intermodal terminal is generally located east of the Metrorail along NW 1 <sup>st</sup> Avenue. The existing Downtown Miami bus terminal site would be consolidated with this new intermodal facility which would feature bus bays, layover bays, internal bus circulation areas, kiss –and-ride, bus stops, and boarding areas. A cost estimate will be developed as this study progresses. A preferred alternative has been identified and includes 22 bus bays that can accommodate a combination of 16 standard sized buses and 6 articulated buses. The preferred alternative site is located immediately to the east of the Government Center Metrorail Station between NW 1 <sup>st</sup> Street and NW 3 <sup>rd</sup> Street. This site is currently under private ownership and has been identified as a potential station location within the context of two parallel and on-going studies: The South Florida East Coast Corridor (SFECC) Study and Florida East Coast Industries (FECI)'s All Aboard Florida.	To be determined upon further study.
<b>Electronic Transit Information Kiosks</b>	MDT strives to provide a high degree of passenger amenities which in turn offer passengers efficient and convenient transfers. Passenger convenience will be enhanced at key Metrorail stations with the installation of new informational kiosks at the Airport, Earlington Heights and Okeechobee Road Metrorail stations. The existing informational kiosk at South Miami will be replaced with a new one.	Committed Improvement
<b>Dadeland South Intermodal Station</b>	The Dadeland South Intermodal Station project includes facility improvements to the parking garage, roadways, signage, fencing, painting, landscaping, canopy, escalators and lighting up-grades.	Committed Improvement

**Table 7-6: 2023 Recommended Service Plan Transit Hub Needs (continued)**

Transit Hubs	Status	Unfunded Needs
<p><b>Northeast Transit Hub Enhancements (NETHE)<sup>1</sup></b></p>	<p>Since determining that the Northeast Passenger Activity Center (NEPAC) project was no longer feasible, MDT identified a feasible project alternative and has proposed transit hub improvements at two existing transit hubs – the Mall at NW 163<sup>rd</sup> Street and Aventura Mall. Currently both of these transit hubs which serve the northeast portion of the County and are major destinations with important bus connections have multiple deficiencies (e.g., capacity, drainage, pavement, shelters, lighting, access, signage etc.). Therefore, MDT has created a new project which is referred to as the Northeast Transit Hub Enhancements (NETHE). This new project will upgrade both transit hub sites to improve bus and passenger access as well as upgrade area drainage, lighting, signage, shelters and other station area amenities. This project features a total of 16 bus bays: 6 bus bays are proposed at the Aventura Mall site; 6 articulated bus bays are proposed along NE 167<sup>th</sup> Street; and 4 bus bays are proposed along NE 15<sup>th</sup> Avenue.</p>	<p>Committed Improvement</p>
<p><b>Miami Intermodal Center (MIC)</b></p>	<p>FDOT is managing this project. FDOT has over \$400 million programmed for the MIC distributed among 17 projects. These include the rental car HUB, the MIC Core Roadway and intersection improvements, transit connections to the terminal building, utilities relocation, etc. Phase I (MIC Core) includes the bus terminal facilities and infrastructure to coordinate with other modes. Both the MDT Bus Terminal Facility and the Airport Metrorail Station opened for service in July 2012. The Tri-Rail component of this facility is currently under construction and is scheduled to open in 2013. The MDT Bus Terminal Facility features a total of 13 bus bays (6 of the 13 bays are used for layover).</p>	<p>Committed Improvement</p>
<p><b>Dolphin Station (HEFT at NW 12<sup>th</sup> Street)</b></p>	<p>Property owned by the FDOT located adjacent to the intersection of the Homestead Extension of the Florida Turnpike (HEFT), SR 836 and NW 12th Street has been identified as a strategic location for a Transit Hub with a park-and-ride facility. This transit hub would support the SR 836 Express Enhanced Bus Service project and provide a potential terminus or stop for several local bus routes serving the Dolphin Mall and nearby cities of Sweetwater and Doral. This site will be further evaluated for its potential to support a Transit Oriented Development (TOD).</p>	<p>To be determined upon further study</p>
<p><b>South Miami-Dade Busway at SW 344<sup>th</sup> Street</b></p>	<p>Miami-Dade Transit is planning to build a 266 space parking lot with bus bays and shelters, located west of the southern end of the Busway between NW 2<sup>nd</sup> Avenue and NW 3<sup>rd</sup> Avenue at SW 344<sup>th</sup> Street (Palm Drive), in Florida City. This project features 10 bus bays and a layover area. Currently MDT is in the process of completing the dry-run permit process.</p>	<p>Committed Improvement</p>

**Table 7-6: 2023 Recommended Service Plan Transit Hub Needs (continued)**

Transit Hubs	Status	Unfunded Needs
<b>NW 27<sup>th</sup> Avenue and NW 215<sup>th</sup> Street</b>	A 14-acre vacant parcel adjacent to the intersection of the Turnpike (HEFT) and NW 27 <sup>th</sup> Avenue has been identified as a strategic park-and-ride location for the NW 27 <sup>th</sup> Avenue Enhanced Bus Service project. Up to 350 parking spaces are proposed for this facility which would serve as the northern most station for the new enhanced bus or BRT service in the corridor. This park-and-ride also provides strategic transit oriented development (TOD) opportunities. This project features 6 bus bays and 2 layover bays.	Committed Improvement
<b>SW 147<sup>th</sup> Avenue and SW 8<sup>th</sup> Street</b>	An 8-acre vacant parcel on the SW corner of the intersection at SW 8 <sup>th</sup> Street and SW 147 <sup>th</sup> Avenue has been identified as a strategic park-and-ride location for the SR-836 Express Enhanced Bus Service project. Up to 500 parking spaces are proposed for this facility which would serve as the western most station for the new enhanced bus or BRT service in the corridor. This park-and-ride lot also provides strategic transit-oriented development (TOD) opportunities. This project features 8 bus bays that can accommodate articulated buses and a layover area.	Committed Improvement
<b>NW 7th Avenue and NW 62<sup>nd</sup> Street</b>	This proposed MDT joint development project is expected to provide space for an enhanced transit facility within the context of an active, mixed-use development including space for housing, community-serving activities and functions in addition to retail use. The project includes 25 park-and-ride spaces and 4 bus bays.	Committed Improvement
<b>Golden Glades Multimodal Terminal</b>	MDT recommends that the FDOT Golden Glades Interchange System Improvements – Ultimate Plan consider improvements to the existing park-and-ride lots located at the Golden Glades Interchange. The Golden Glades Multi-Modal Terminal was studied under a separate PD&E study (FM#251684-1-22-01) that contemplates the following improvements as part of Phase 1: new transit platforms with canopy, new intercity bus platform with canopy, “Hub” facility containing stairs, elevators, enclosed waiting area, restrooms, and enclosed operational spaces with canopies, new pedestrian bridge leading to existing pedestrian bridge serving Tri-Rail and roadway improvements. Phase 2 includes construction of a parking garage to accommodate 1,300 vehicles. This project features a total of 16 bus bays for MDT and BCT buses (9 bus bays are needed in for Phase 1 and 11 bus bays are needed for Phase 2).	To be determined upon further study
<b>Palmetto Intermodal Terminal</b>	MDT recommends that the FDOT SR 826/Palmetto Expressway Managed Lanes Project Development and Environment (PD&E) Study address the feasibility of acquiring an 11.88-acre semi-vacant parcel of land located immediately south of the Palmetto Metrorail Station for the purpose of constructing the Palmetto Station Intermodal Terminal that will include but not be limited to: long-term parking, short-term parking, kiss-and-ride, pool-and-ride and a minimum of 6 bus bays and 2 layover bays.	To be determined upon further study

**Table 7-6: 2023 Recommended Service Plan Transit Hub Needs (continued)**

<p><b>NE 151st Street and Biscayne Boulevard</b></p>	<p>Property owned by the City of North Miami located on the southeast corner of NE 151<sup>st</sup> Street and Biscayne Boulevard was identified in an MPO Study titled “Improving Access in Florida International University Biscayne Bay Campus Area” as a strategic location for a Transit Terminal Facility. MDT is pursuing incremental improvements along the Biscayne Boulevard Corridor and an implementation plan for the Biscayne Enhanced Bus are currently being drafted through the MPO. This site will be further evaluated as a strategic Park-and-Ride/Transit Terminal Facility as part of the implementation plan for the Biscayne Enhanced Bus. This project features 6 bus bays and 2 layover bays.</p>	<p>To be determined upon further study</p>
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<sup>1</sup>Miami-Dade Transit worked with the City of North Miami Beach and other stakeholders for the last several years to develop a transit hub near the Mall at NE 163rd Street. However, after numerous meetings and several attempts to reach an agreement with the City of North Miami Beach on the project scale, scope and capital cost of the preferred site, MDT has determined that this project is no longer feasible and will not be implemented. Subsequently, the NETHE is being studied.

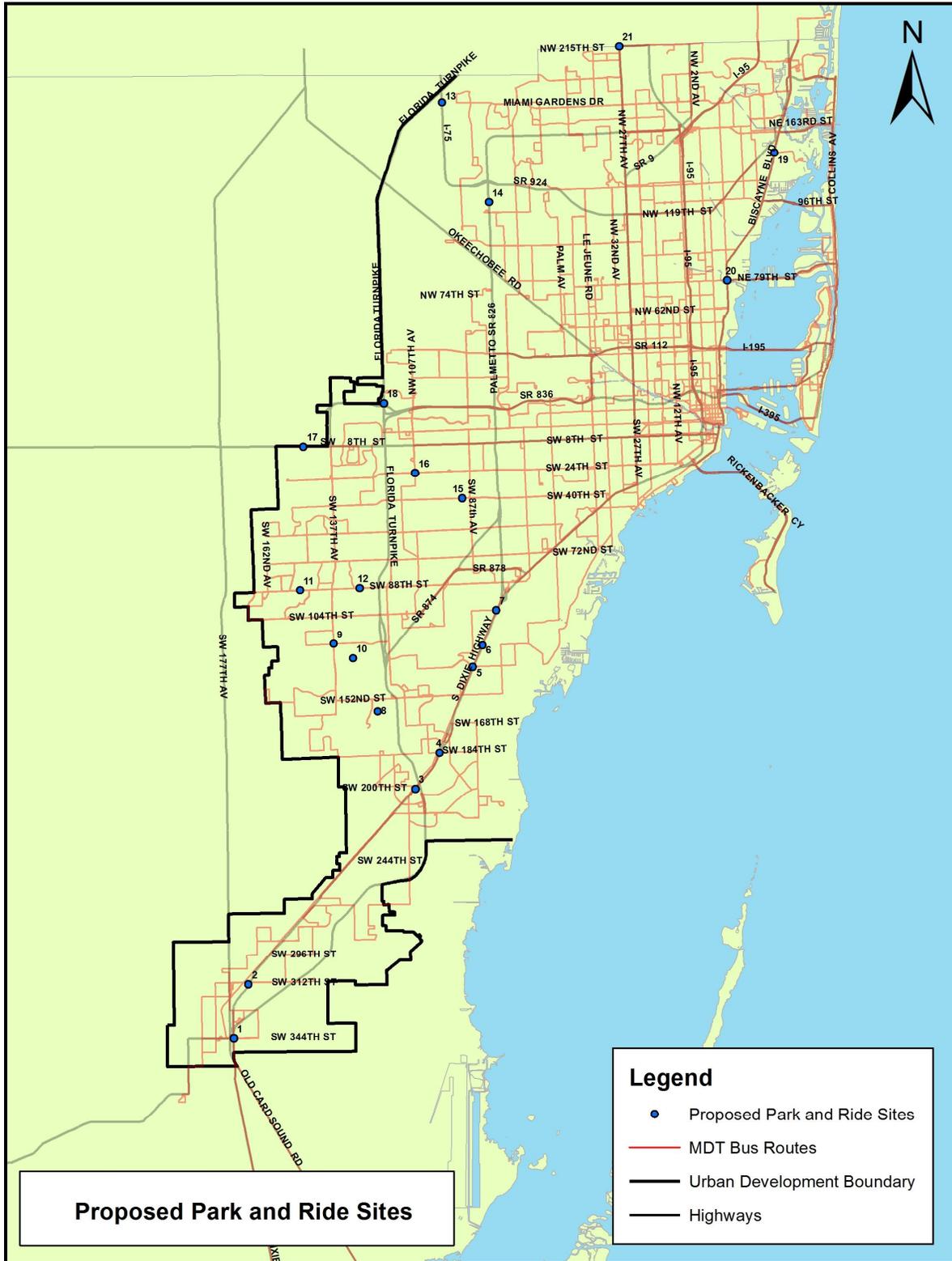
<sup>2</sup>A committed improvement is defined as a project for which funds have been programmed in either a local, state or federal plan.

**Table 7-7: Proposed Park-and-Ride Sites**

Map ID	Name	Location
1	Busway Lot	Busway and SW 344th Street
2	Busway Lot	Busway and SW 312th Street
3	Busway Lot	Busway and SW 200th Street
4	Busway Lot (Quail Roost Park-and-Ride)	Busway and SW 184th Street
5	Busway Lot	Busway and SW 136th Street
6	Busway Lot	Busway and SW 124th Street
7	Busway Lot	Busway and SW 104th Street
8	Kendall South/Zoo Miami	Zoo Miami Park
9	Kendall-Tamiami Executive Airport Park-and-Ride	SW 137th Avenue and SW 120th Street
10	SR 874 Ramp Connector Park-and-Ride	SW 122 Avenue and SW 128 Street
11	Kendall Drive and SW 150th Avenue (purchase)	SW 150th Avenue and SW 88th Street
12	FPL Lot	SW 127th Avenue and SW 88th Street
13	I-75 Park-and-Ride Lot (FDOT Study)	I-75 and Miami Gardens Drive Interchange
14	Palmetto Intermodal Terminal	Palmetto Expressway and NW 74th Street
15	Senator Villas	Between SW 89th Avenue and SW 89th Court at SW 40th Street
16	Tamiami Park-and-Ride at Coral Way	SW 107th Avenue and SW 24th Street
17	Park-and-Ride/Transit Terminal Facility at SW 147th Avenue and SW 8th Street	SW 147th Avenue and SW 8th Street
18	Park-and-Ride/Transit Terminal Facility at Dolphin Station	HEFT at NW 12th Street
19	Park-and-Ride/Transit Terminal Facility at NE 151st Street and Biscayne Blvd.	Biscayne Boulevard and NE 151st Street
20	Little River Park-and Ride	Biscayne Boulevard and NE 79th Street
21	Park-and-Ride/Transit Terminal Facility at NW 27th Avenue and NW 215th Street	NW 27th Avenue and NW 215th Street

Source: Miami-Dade Transit, 2013

Figure 7-3: Proposed Park-and-Ride Sites



Source: Miami-Dade Transit, 2013

### 7.3.2 Incremental Improvements along Premium Transit Bus Corridors

In recent years, public transportation improvements have been adversely impacted due to unfavorable economic conditions. Several projects including the North Corridor and East-West Corridor have been placed on hold due to Miami-Dade County's inability to pay the cost to construct, operate and maintain these large and complex projects. As a result, a coordinated effort among local transportation agencies was initiated to evaluate more affordable, cost effective alternatives.

The MPO Short-Term Transit Improvement Options (STTIO) task Force included regional transit partners such as the Miami-Dade Expressway Authority (MDX), MDT, Miami-Dade Public Works Department (PWD), the Office of Strategic Business Management (OSBM) and the Office of the Citizens' Independent Transportation Trust (CITT), FDOT and representatives from the County Executive Office.

The "Modal Options Preliminary Analysis Summary," is the result of this coordinated work effort among transportation partners. In short, the report provides preliminary information detailing revenue, service, and ridership information on various transit options such as Heavy Rail Transit (HRT), Light Rail Transit (LRT), Bus Rapid Transit (BRT), and BRT-Lite/Enhanced Bus Service (BRT-Lite/EBS) and demonstrates that there appears to be cost-effective options to heavy rail. The North and East-West enhanced bus corridor projects will increase mobility while continuing to build ridership for a future BRT and possibly heavy rail project.

#### 7.3.2.1 North Corridor (NW 27<sup>th</sup> Avenue Enhanced Bus)

Miami-Dade Transit is pursuing incremental improvements along the NW 27<sup>th</sup> Avenue corridor by providing approximately 13 miles of enhanced limited stop arterial bus service from the MIC at MIA to NW 215<sup>th</sup> Street. This enhanced bus project will feature specially-branded diesel/electric hybrid articulated buses or other alternative fuel buses as well as strategic park-and-ride lot locations. This will be implemented in two phases. Phase I was completed in July 2012 with the implementation of the new Route 297 (the 27<sup>th</sup> Avenue Orange MAX) which features 15 minute peak/30 minute mid-day headways using existing fleet buses, WiFi, and real-time "Where is the Bus?" information. Phase I is funded.

Phase II is expected to be complete in 2017. This phase consists of service with 10 minute peak/20 minute mid-day headways using 11 new 60-foot articulated diesel/electric hybrid, clean diesel, compressed natural gas, or other alternative fuel buses, transit signal priority, robust stations, WiFi, real-time "Where is the Bus?" information, branding of buses and stations and an end-of-the-line park-and-ride/bus terminal station at NW 27<sup>th</sup> Avenue and NW 215<sup>th</sup> Street. Phase II of this project has a capital cost of approximately \$27 million and is funded.

#### 7.3.2.2 East-West Corridor (SR-836 Express Enhanced Bus)

Miami-Dade Transit is pursuing incremental improvements along the SR 836 corridor by providing approximately 13 miles of enhanced express bus service from SW 8<sup>th</sup> Street/SW 147<sup>th</sup> Avenue to the MIC at MIA. Revenue service is anticipated in 2017 and includes long term service with 10 minute headways using 11 new 60-foot articulated diesel/electric hybrid, clean diesel, compressed natural gas or other alternative fuel buses, transit signal priority, robust stations, WiFi, real-time "Where is the Bus?" information, branding of buses and stations, and an end-of-the-line park-and-ride/bus terminal station at SW 8<sup>th</sup> Street and SW 147<sup>th</sup> Avenue.

### 7.3.2.3 East-West Corridor (Flagler Enhanced Bus)

Miami-Dade Transit is pursuing incremental improvements along Flagler Street by providing approximately 14.5 miles of enhanced bus service from Downtown Miami to West Miami-Dade County. Revenue service is anticipated to begin in 2018 using 10 new 60-foot diesel/electric hybrid, clean diesel, compressed natural gas, or other alternative fuel buses. Service headways will be 12 minutes during the AM and PM peak-hour and 30 minutes during the mid-day. This route will also serve a proposed park-and-ride/bus terminal station at SW 8<sup>th</sup> Street and SW 147<sup>th</sup> Avenue.

### 7.3.2.4 Northeast Corridor (Biscayne Enhanced Bus)

Miami-Dade Transit is pursuing incremental improvements along Biscayne Boulevard/US-1 from Downtown Miami to the Aventura Mall. Revenue service is anticipated to begin in 2014 using 11 new 60-foot diesel/electric hybrid, clean diesel, compressed natural gas, or other alternative fuel buses. Service headways will be 15 minutes during the AM/PM peak-hour and 20 minutes during the mid-day. The bus purchase component is considered Phase I for this corridor.

The MPO, in cooperation with MDT, is performing an Implementation Plan for the Biscayne Boulevard Enhanced Bus Service project. This Enhanced Bus Service route will feature robust stations, WiFi, real-time "Where is the Bus?" arrival times via the internet or on web-enabled mobile devices, real-time "Next Bus" arrival information via electronic signs, transit signal priority and park-and-rides. Phase II for the Biscayne Enhanced Bus Service project is expected to be completed by 2020.

### 7.3.2.5 Kendall Corridor (Kendall Enhanced Bus)

Miami-Dade Transit is pursuing incremental improvements along Kendall Drive (SW 88th Street) from the West Kendall Transit Terminal at Kendall Town Center (Kendall Drive and SW 162nd Avenue) to the Dadeland North Metrorail Station. Phase I was completed in 2010 with the implementation of the new Route 288 (Kendall Cruiser) which features 12 minute peak-hour headways using 60-foot diesel/electric hybrid buses, WiFi, and real-time "Where is the Bus?" information.

Phase II is expected to be complete in 2022. This phase consists of robust stations, queue jump lanes, transit signal priority, and real-time "Next Bus" arrival information via electronic signs.

### 7.3.3 Bus Fleet Expansion

The 2023 RSP service improvements identify the peak vehicle requirements (PVR) for designated bus routes. A determination of bus fleet needs based on the 2023 RSP, which accounts for a 20 percent (20%) vehicle spare ratio results in a total requirement of 112 buses. Table 7-8 shows how many buses are needed to include 40-foot and 60-foot as well as 40-foot commuter coach diesel/electric hybrid, clean diesel, compressed natural gas, or other alternative fuel vehicles. This fleet need also includes new service routes. Based on the RSP, there will be no additional purchase needs of minibuses.

**Table 7-8: Bus Fleet Vehicle Needs**

Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	Sub-Total Needs	Additional Spare Buses Needed	Total Buses Needed
<b>Existing Routes</b>												
Full size	-5	10	0	-9	-10	0	0	0	0	-14	0	-14
Articulated	12	0	0	0	-4	0	0	0	0	8	1	9
Commuter Coach	0	0	0	0	0	0	0	0	0	0	0	0
Sub-Total	7	10	0	-9	-14	0	0	0	0	-6	1	-5
<b>New Routes</b>												
Full size	6	6	0	0	0	0	21	0	0	33	4	37
Articulated	11	0	0	22	10	0	5	0	0	48	10	58
Commuter Coach	7	0	6	0	0	0	0	0	5	18	4	22
Sub-Total	24	6	6	22	10	0	26	0	5	99	18	117
<b>GRAND TOTAL</b>	<b>31</b>	<b>16</b>	<b>6</b>	<b>13</b>	<b>-4</b>	<b>0</b>	<b>26</b>	<b>0</b>	<b>5</b>	<b>93</b>	<b>19</b>	<b>112</b>

Source: Miami-Dade Transit 2013

### 7.3.4 Alternative Fuels

Several major transit agencies around the U.S., such as the Washington Metropolitan Area Transit Authority (WMATA) have successfully incorporated Compressed Natural Gas (CNG) buses and infrastructure into their transit systems in order to achieve operational cost savings. Initial transit agency analysis as well as responses received from interested vendors to a Request for Information (RFI) issued by the County’s Internal Services Department (ISD) indicates that using CNG in MDT’s bus fleet has the potential for significant savings over a diesel or hybrid bus fleet. The amount of savings and the timeframe of the savings are dependent upon how the procurement of CNG infrastructure and vehicles are structured and when the transition is implemented. MDT is working in conjunction with other County departments on a priority initiative to assess the feasibility and financial impact of transitioning to (CNG) fuel in its bus and heavy truck fleets at various locations and to develop a comprehensive implementation strategy that will optimize cost savings.

### 7.4 Infrastructure Renewal Program Needs

The following table identifies a number of proposed projects that have been determined by MDT as necessary for the upkeep and maintenance of existing infrastructure to ensure the MDT transit system operates in a state of good repair. The infrastructure renewal program (IRP) includes planned investments in the following program areas:

- Information technology, including data center modernization, network upgrades, and improved accident/incident reporting;
- Passenger amenities, including escalator covers and improved signage;
- Passenger facilities, including escalator and elevator replacements, Busway improvements, and platform refurbishments;
- Rolling stock, including bus maintenance component replacements (bus vehicle fleet replacement schedule is provided in the Appendix);
- Systems, including wayside overhauls, uninterrupted power supplies, AC unit substations, train control system replacement, traction power substations, and traction power cabling;
- Maintenance facilities, including bus garage lot resurfacing, emergency backup generators, and A/C replacement;

- Safety and security, including fire alarm replacement, railing replacements, and pedestrian safety improvements; and,
- Track and guideway, including guideway painting, frog replacement, and work vehicles.
- Field engineering and systems maintenance
- Design and engineering

The proposed year of implementation is also presented for the FY 2014-2023 planning horizon (Table 7-9).

**Table 7-9: Proposed Infrastructure Renewal Program Need (2023)**

Classification	Project Name	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total Est. Cost YOE
Information Technology	Mover Wireless Systems		\$ 330,000									\$ 330,000
Information Technology	Mobile Technology Tools & Bus Driver Training Systems-Vigil			\$ 450,000								\$ 450,000
Maintenance Facilities	Central O&I Garage Shop Floor Leveling		\$ 1,440,000									\$ 1,440,000
Maintenance Facilities	Bus Garages: Northeast Rollup Doors		\$ 450,000									\$ 450,000
Maintenance Facilities	Bus Garages: Bus Washers and Cyclones			\$ 800,000								\$ 800,000
Maintenance Facilities	Bus Maintenance DEF Dispensing System		\$ 300,000									\$ 300,000
Maintenance Facilities	Chiller Unit Replacement	\$ 1,110,000										\$ 1,110,000
Passenger Amenities	Metrorail & Metromover Train Wash			\$ 300,000								\$ 300,000
Passenger Amenities	Metromover Station Ceiling Signage Cabinet Replacement	\$ 270,000	\$ 270,000	\$ 270,000	\$ 270,000							\$ 1,080,000
Passenger Amenities	Metrorail Parking Fare Payment Signage	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000							\$ 80,000
Passenger Amenities	Metrorail & Metromover Regulatory Signage Replacement	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000							\$ 200,000
Passenger Amenities	Metrorail Station Identifier Sign Panel Replacement	\$ 70,000	\$ 70,000	\$ 70,000	\$ 70,000							\$ 280,000
Passenger Amenities	Metrorail/Metromover Vehicle Signage Replacement	\$ 140,000	\$ 140,000	\$ 140,000	\$ 140,000							\$ 560,000
Passenger Facilities	Parking Garages Relamping		\$ 700,000	\$ 1,320,000								\$ 2,020,000
Passenger Facilities	Metromover Lighting		\$ 1,100,000	\$ 1,210,000								\$ 2,310,000
Passenger Facilities	College Bayside Station Lighting			\$ 110,000								\$ 110,000
Passenger Facilities	College North Station Lighting			\$ 110,000								\$ 110,000
Passenger Facilities	First Street Station Lighting			\$ 110,000								\$ 110,000
Passenger Facilities	Metrorail Station Refurbishment / Door Replacement at Metromover	\$ 2,240,000	\$ 2,320,000		\$ 2,470,000							\$ 7,030,000
Passenger Facilities	Escalators Replacement / Elevators Refurbishment	\$ 3,730,000	\$ 3,860,000	\$ 3,990,000	\$ 4,120,000							\$ 15,700,000
Passenger Facilities	Parking Garages Overhaul	\$ 1,120,000	\$ 1,160,000	\$ 1,200,000								\$ 3,480,000
Rolling Stock	Vehicle Replacement (P-Cars)			\$ 420,000								\$ 420,000
Rolling Stock	Bus Maintenance E Stroke Brake Monitoring System on Optima Buses		\$ 330,000									\$ 330,000
Rolling Stock	LED Signal Upgrades		\$ 70,000									\$ 70,000
Rolling Stock	Bus Maintenance Component Replacement Plan	\$ 4,920,000	\$ 4,070,000	\$ 6,080,000	\$ 6,220,000							\$ 21,290,000
Rolling Stock	Bus Replacement Plan	\$ 85,870,000	\$ 52,000,000	\$ 57,000,000	\$107,000,000							\$ 301,870,000

**Table 7-9: Proposed Infrastructure Renewal Program Need (2023) (continued)**

Classification	Project Name	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total Est. Cost YOE
Safety & Security	Lehman Facility - Fire Systems	\$ 2,500,000										\$ 2,500,000
Safety & Security	Emergency Plumbing Fixtures		\$ 370,000									\$ 370,000
Safety & Security	William Lehman Site Lighting		\$ 1,100,000									\$ 1,100,000
Systems	Conduit Grounding Rebuild			\$ 80,000								\$ 80,000
Systems	Train Control DC Power Source			\$ 450,000								\$ 450,000
Systems	Traction Power Cabling		\$ 5,060,000	\$ 5,080,000	\$ 5,050,000							\$ 15,190,000
Systems	Metromover Wayside Overhaul	\$ 25,105,080										\$ 25,105,080
Systems	Metrorail Redundant Track Circuit System	\$ 3,830,000										\$ 3,830,000
Systems	Traction Power Gap Ties		\$ 1,830,000	\$ 1,900,000	\$ 1,950,000							\$ 5,680,000
Systems	Train Control Systems Replacement	\$ 50,000	\$ 1,050,000	\$ 32,100,000	\$ 34,800,000							\$ 68,000,000
Systems	Traction Power Substations		\$ 17,680,000	\$ 18,260,000	\$ 18,860,000							\$ 54,800,000
Systems	Wayside Overhaul	\$ 20,960,000			\$ 32,980,000							\$ 53,940,000
Systems	AC Unit Substations			\$ 8,650,000	\$ 8,940,000							\$ 17,590,000
Systems	Switch Machine Cable - Yard			\$ 1,040,000	\$ 1,080,000	\$ 1,110,000						\$ 3,230,000
Systems	AC Unit Substations - Palmetto Yard			\$ 4,230,000	\$ 4,360,000							\$ 8,590,000
Systems	Switch Machine Cable- Mainline	\$ 1,220,000	\$ 1,270,000	\$ 1,380,000								\$ 3,870,000
Systems	Replace Switch Machines - Yard		\$ 950,000	\$ 980,000	\$ 1,010,000							\$ 2,940,000
Track & Guideway	Replacement Work Vehicles 10-15 Year Plan			\$ 1,500,000								\$ 1,500,000
Track & Guideway	Metromover Inner Loop Guideway Painting	\$ 11,630,000										\$ 11,630,000
Track & Guideway	Metromover Omni Extension Guideway Painting	\$ 390,000	\$ 380,000	\$ 8,820,000								\$ 9,590,000
Track & Guideway	Metrorail Steel Box Girder Guideway Painting	\$ 550,000	\$ 520,000	\$ 9,550,000	\$ 6,490,000							\$ 17,110,000
Track & Guideway	Fastener Replacement Station Areas		\$ 1,420,000	\$ 1,400,000	\$ 1,360,000							\$ 4,180,000
<b>TOTAL</b>		<b>\$ 165,775,080</b>	<b>\$100,310,000</b>	<b>\$ 169,070,000</b>	<b>\$237,240,000</b>	<b>\$ 1,110,000</b>	<b>\$ -</b>	<b>\$ 673,505,080</b>				

Source: Miami-Dade Transit, Infrastructure Renewal Program Existing System FY 2012-13 (July 2010) (PRO-FORMA IRP) IRP is partially funded.